

# EXCESSIVE INFANT-MORTALITY:

HOW CAN IT BE STAYED?

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ON

## INFANT-ALIMENTATION,

OR ARTIFICIAL FEEDING,

AS A SUBSTITUTE FOR BREAST-MILK, CONSIDERED  
IN ITS PHYSICAL AND SOCIAL ASPECTS.

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# EXCESSIVE INFANT-MORTALITY:

## HOW CAN IT BE STAYED?

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Statistics of infant mortality—ignorance of the laws of health—prevailing social habits prejudicial to infants—want of maternal presence—the fashionable mother—the working mother—God's laws preservative—man's wilfulness destructive—causes of infant sickness and mortality—"teething" not a cause—hurtfulness of over-feeding—Dr. Farr's remarks—convulsions—medical prejudice against the use of vegetable food—not justified by physiology nor by chemistry—unsuitableness of a stranger's milk—author's *theory* of "essences" in milk.

The object of the writer is to enquire into a few of the more prominent causes of early death, and to discuss the best means of preventing some of the disorders which so often prove fatal to young children.

The following extract from a Report of the Registrar General, will sufficiently show the urgent need that exists for such an enquiry:—"Of the deaths in England in 1859, no less than 184,264—two in every five of the deaths of the year—were of children under five years of age; and above half of these—105,629—had scarcely seen the light, and never saw one return of their birthday.\*

It is not for want of the widest publicity being

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\* By a more recent record we learn that from 43 to 45 infant deaths take place in every hundred births—45 per cent! Almost half the number of children who are born, die—perish miserably! and this is far from representing the whole mass of pain and suffering, which it is the calamity of children to endure.

given to these figures through the medium of the press, if we remain ignorant or inactive concerning the melancholy fact which they reveal. Notwithstanding the advances which sanitary science is assuredly making, an almost inappreciable decrease has taken place in the amount of mortality recorded; whatever may have been done of late years—and it is not a little—to improve the sanitary condition of the people, there is yet something wanting to be effectively applied as a preventive, by which sickness and mortality may be, in a sensible degree, checked.

If ignorance and neglect of the laws of health increase largely the *general* death rate, how much more destructive of life must these agencies prove in the case of the infant population!

It is a remarkable fact that the amount of infant mortality in England far exceeds any thing of the kind in any other part of the civilized world.\* How is it that we, a highly refined, humane, and enlightened people, in this respect fall so far below, not only less cultivated races of mankind, but even some species of the animal creation?†

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\* In the *Lancet* of the 13th December last, appears a short paragraph headed "Infant mortality in India," in which it is stated that 80 per cent. is the rate of mortality among infants in that country, while in the poorest and most closely populated districts in England it is only 22 per cent. There must surely be some inaccuracy in the above figures; for it has been stated elsewhere that 43 per cent. is the amount of infant mortality computed to take place in all England, and these figures only represent *ascertained* deaths; that is to say, only those which are registered or classified; but it is probable that the tables of the Registrar General would be much augmented as regards infant deaths, if some systematic cognizance could be taken of *still-births*. It is much to be hoped that ere long this important branch of the subject will come practically within the province of medical jurisprudence.

† The Comparative Properties of Milks, pp. 6 & 7. John Churchill and Sons.

In order the better to answer that question, it might be interesting and instructive to enquire how far the present constitution and requirements of "society" militate against the development of the domestic virtues, especially against the exercise of the maternal affections; it cannot be doubted by the thoughtful observer of social manners of the present day, that the practice prevalent amongst mothers, of absenting themselves from their maternal duties, must have a prejudicial effect upon the health of the infant population; it is *one great source* of the excessive mortality which takes place amongst young children: the habitual absence of the mother from her home—no matter in what station of life this practice prevails—is fraught with much evil. Whether from the demands of fashion upon its votaries, or from the supposed necessity that induces working mothers to seek industrial employment, which deprives the family of her presence and her care, the results are, in both cases, equally unfortunate to the children. The fashionable mother deputes a "wet nurse" to supply the maternal nourishment, whilst the working mother places her infant out to be "dry nursed;" both plans being most disastrous in a sanitary and social point of view. Luxury and poverty thus contribute a like share to the number of tiny graves which crowd our churchyards.\*

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\* A remarkable illustration of the efficacy of maternal care in the preservation of infant life, even under very trying and opposing circumstances, may be with advantage mentioned here:—

During the well-known Preston strike a marked diminution in the number of infant-deaths took place, at a time of extreme destitution, which might be supposed to operate in the contrary direction. An explanation may be



Time will not admit of these reflections being pursued, but the *fact*, in all its enormity, remains to be dealt with. AN ANNUAL SLAUGHTER OF INNOCENTS TAKES PLACE in this gifted land of ours, surpassing in numbers those of adults, who are in the same space of time, swept down in battle, killed on railways, or by any other mechanical "accident," so called. We must grapple with this evil, and that speedily, if we would not merit the reproach of admitting *infanticide* as an institution into our social system.

It has been previously stated, that of all the children who die, more than half quit this world almost as soon as they enter it, viz., before they have reached one year old.

It is considered by some that the fragility of infant life, is sufficient to account for a great portion of the premature mortality which takes place; but we will dismiss that idea at once. It cannot be supposed, upon reflection, that the Almighty intended these little ones to die. There is every *material* proof to the contrary. Has He not wisely and beneficently adapted all their physical wants to the circumstances in which they are supposed to be naturally placed? Has He not surrounded them with every condition and requirement necessary for the maintenance of

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found in the fact, that the mothers being unable to obtain work in the mills, were compelled to stay at home and take care of their children. Thus *the influence of the maternal presence is sufficient to overcome those very powerful agents of destruction—WANT and STARVATION.* Let social and sanitary reformers ponder the lesson thus taught.

The same tale is repeated over and over again for our instruction. We had not long ago the distress of the Coventry weavers, and now the Lancashire famine, both instances of unusually hard times, followed by a noticeable decrease in the rate of infant mortality in the respective districts.

life and health? Moreover, for the preservation of His people, He has ordained certain natural laws to be observed, the neglect of which must necessarily be followed by disease and premature death.

When we reflect upon the amount of ignorance and neglect to which infants are subjected, our surprise must be that the death rate is not higher. Those who may have stood at the bed-side of a sick child during a severe and protracted illness, cannot fail to have observed the wonderful endurance of which these little sufferers are capable. If it were not for this surprising *tenacity*—so to speak—with which children cling to life, there would be fewer of those who struggle through the most terrible disorders, and escape for awhile the grave, carrying about with them, however, an enfeebled frame and a shattered constitution to the end.

One or two causes of infant-sickness and mortality only, can now be considered; and it is the less important to advert to more general subjects bearing upon the present enquiry, because I believe that reform in many sanitary matters has fairly commenced, and will certainly make progress, however slowly. It is not so however with the subject of INFANT-FEEDING. The public mind seems to stand still on that question. It is assuredly one, concerning which a vast amount of ignorance and misconception prevail.

However injurious the neglect of other sanitary observances may be to the infant constitution, it is

my belief, that if a more judicious system of feeding infants prevailed, they would be in a condition to resist the unhealthy influences derived from the circumstances, by which they are in many cases almost necessarily surrounded.

Children if properly fed would not be so susceptible as ill-fed children of attacks from epidemics, nor would they so frequently succumb to the disorders incidental to infancy.

The following ailments, prevalent amongst children, are more or less caused by errors in diet:—

1. CONVULSIONS, (generally attributed to teething.)
2. DEFECTIVE ASSIMILATION.
3. ATROPHY.
4. MESENTERIC DISEASE.
5. HYDROCEPHALUS.
6. RICKETS.
7. DIARRHŒA, and numerous other disorders.

“Teething” is a natural process, although it is so often to be found in the tables of the Registrar General as a *cause* of death. The period of dentition would be passed over satisfactorily in the great majority of cases if not interfered with by injudicious management. The brain is peculiarly susceptible in infancy while the developmental processes are in operation; and it is the more important that unusual care should be exercised during the evolution of the



teeth, to avoid every thing that can obstruct the machinery which NATURE, when not interfered with, works so perfectly.

OVER-FEEDING is especially hurtful. It is from that cause that *convulsions* so frequently occur with children, during the early months of their existence. Not fewer than 25,000 deaths—chiefly of infants—from “convulsions,” took place in the year 1859. Can it be said that these were “natural” deaths? although under that description the sudden deaths of infants are most frequently recorded.

Efforts have been made to obtain a better classification of the “causes” of death, but the arrangement is still far from perfect. For instance, no certificate describing a death as “natural” should be accepted, save in those rare cases which can be referred to the decay of old age, when—as it has been graphically described—“the weary wheel of life stands still.” The word “teething” should also be expunged from the Registrar’s tables as a *cause* of death, no such thing ever occurs.

With reference to the 25,000 deaths from “convulsions” Dr. Farr remarks,—“probably these are only part of the disease which is the result of organic lesions, or local irritations, that are never discovered.” So it is with “teething;” some unfavourable circumstances or conditions produce convulsions: and, because it is the custom to ascribe convulsive seizures, of whatever nature, to irritability attending dentition, this prevailing error takes place.

It is a remarkable fact, that whilst the children of the middle and upper classes, when not wet-nursed, are kept upon animal milk alone, and are consequently insufficiently nourished; those of the poor and labouring people are actually *over-fed*, that is to say, with unsuitable food, or an excess of what might otherwise be proper.

To the disastrous effects of the excessive use of farinaceous food may be attributed the fact that medical men, for the most part, prohibit its use altogether. This is remarkable, considering that the majority of *Cereals* of the class which we appropriate to our use as articles of daily food, possess those constituents which play an important part in the human system, as *flesh-formers* and *heat-producers*; just that kind of artificial aid which is necessary to the physical economy of an infant, who is so unfortunate as to be deprived of the comfort and advantage of its mother's breast.

It may be worth while to ask ourselves seriously and thoughtfully, whether by depriving the hand-reared infant of these important elements in its food, we are justified by any physiological facts, with which we are acquainted, or by the results of medico-chemical research, which may bear upon this interesting question?

One other point remains, to which I must not omit to refer. The practice of employing "wet nurses" has been spoken of in the course of these remarks. I will not now enter into the *moral* evils resulting from

that practice, but confine myself to the sanitary view of the subject.\*

Supposing a mother to be incapable of affording the maternal nourishment to her child, I would wish to suggest, that the milk of a stranger is not the fitting substitute; "*no other milk than the mother's can suit her own child, and her milk is not proper for any other child.*" This peculiarity belonging to individual milk, is not to be discovered by an analysis of its elements; these resemble each other, with little variation, in different specimens of the same kind of milk; and by a chemical comparison of the elements in the milks of different animals, the relative proportions of those elements are found scarcely to vary at all; but the milk of each individual—speaking more particularly of human milk—possesses its own peculiar *quality*, or *essence*, or *power*, which cannot be detected by any known processes of analytical chemistry.

This *theory* of a subtle existence in milk will be received, I am aware, with considerable caution, perhaps with much mistrust. It cannot but be expected that so novel a proposition will be questioned; the possibility of such an "essence" however cannot be denied; for however remote the final decision of the question may be, who amongst us can say, without presumption, "it is not so?"

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\* I quite agree with Dr. Leared, who says in his interesting little work on "Infant-Mortality" that "it is a crime for mothers to permit anything but ill-health to interfere with their maternal duties."

# INFANT-ALIMENTATION ;

OR,

ARTIFICIAL FEEDING, AS A SUBSTITUTE FOR  
BREAST-MILK, CONSIDERED IN ITS PHYSICAL  
AND SOCIAL ASPECTS.

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Statistical Congress—wet-nursing—dry-nursing—still-births not registered—criminal aspect of the subject—Dr. Ballard's remarks—infanticide—burial clubs—Dr. Baehhoffner's investigations—artificial feeding—convulsions—the need of experiments by Medical men, as to the value of farinaceous food in cases of hand-reared children.

At the Bradford meeting of the Social Science Association last year, I had the pleasure of contributing to the Public Health Department a paper on the "Practise of Hiring Wet-nurses," showing the numerous evils which are involved in that system ;\* my object being to prove that the cases are very rare in which a wet-nurse is really needed, and that the abuse of the practise must necessarily lead to very serious consequences, not only to individuals, but to the community at large.

This idea being accepted, a question naturally arises as to the best substitute for breast milk in the case of hand-reared children. To that question

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\* Published by John Churchill and Sons, New Burlington Street.

I shall attempt to give a satisfactory answer. A few preliminary observations will be necessary.

In a paper presented to the Sanitary Section of the International Statistical Congress, which held its session in London in 1860, I pointed out the want of accurate information on the subject of Wet nursing, and suggested a simple method by which figures might be obtained in order to show the extent to which the custom prevails in this country; such machinery being set at work, an important means will be available for collecting very interesting and valuable information on subjects of a kindred nature.

The practice of employing wet-nurses cannot be considered and inquired into without revealing many startling facts which are connected with the system. Amongst its most disastrous results may be regarded the fate of the wet-nurse's child, which is in most cases put out to *dry-nurse*, falls into ignorant or unprincipled hands, and, as a consequence, too often meets with premature death. Space does not permit me to enter into a consideration of all the *moral* evils of such a system, but it is enough to speak of the *indifference to infant life* which is thus fostered, and which is evidenced by the fact that a mother is induced, and too readily yields to the temptation, to sell her child's life—for the temporary indulgence in ease and gain. Oh! let those who have any influence in this matter pause ere they help to sever those



holiest and purest of earthly ties which Nature has intended, with wise purpose, should exist between a mother and her child.

In the paper on the "Statistics of Wet-nursing," I alluded to one or two subjects which, although not coming immediately under the inquiry therein indicated, nevertheless present some significant features in relation to it, and for that reason deserve some attention here. I refer to the large number of infants said to be annually "still-born" in this country, and also to the system carried on with regard to children whose names are entered on the books of burial clubs.

With respect to the first-named subject, Lord Shaftesbury, in his address at Liverpool on Public Health, made the following statement—"that no less than 60,000 'still-born' children are produced in this country every year;" adding, that "it is a portentous fact, which demands the most solemn investigation."\*

I am not aware what idea the noble President connected with the fact to which he called attention with so much earnestness; probably his Lordship had in his view the unsanitary condition of

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\* It was stated by Dr. Ballard, at the Statistical Congress, that "England is the only country in which there are no official returns as to 'still-born' children." But although no complete records are at present furnished (because none have been authoritatively required), there must be sources from which such information can be obtained—~~and for instance, the local and burial societies might be required to collect and forward to the registrars and medical officers of health, especially in districts containing workhouses, should make~~ "returns" of a similar kind. It is most desirable that such figures and facts should be systematized and utilized under official authority.

things which it diseloses. Certainly that is a very grave matter—one which may with advantage be inquired into. Why (it may be asked) should so large a number of individuals—so large a portion of the female population—fail to fulfil the natural laws of their being, and thus contribute to such an abnormal and astounding fact as that indicated in the high rate of the “still-born?” Again, how is it that so many mothers who give birth to living children are unable to afford them the maternal nourishment which is their birthright, thus depriving their offspring of the best chances of maintaining existence?

The latter subject was alluded to by Mr. E. Chadwick, at the International Statistical Congress. His remarks referred only to what takes place in Manchester; but it would be worth while to collect information on these points as regards every town and district in the kingdom.

These inquiries are serious enough in a sanitary point of view; but I fear they present another side still more painful and portentous: I allude to the criminal aspect, especially as regards the 60,000 “still-born.” It is probable that more than half of that number ought not to have been so recorded. And to check the evil in future, the law must be brought to bear upon the system to which the evil is due. At present the great facilities afforded for the disposal of “still-born” children offer free inducements to infanticide, which crime is on the

increase, and is, no doubt, perpetrated wholesale in some parishes and districts. Dr. Bachhoffner, the Registrar for Marylebone, has lately instituted inquiries into this matter in the district over which he presides. Some startling facts have been elicited, and the investigation is still being prosecuted; but from what has already transpired, there can be no doubt that some restrictive clauses are urgently needed in the Burial Act with reference to the disposal of infants said to be “still-born,” such subjects having been hitherto enclosed in the coffins of adults without the payment of regular fees, and without requiring the production of a medical certificate.

It will be at once obvious how full of meaning are the foregoing facts in connexion with the subject of this paper, when I suggest that it would be interesting and instructive to know how many of the mothers of “still-born” children had, previously to the birth, decided upon taking up the vocation of wet-nurse. And, again, how many of the infants whose names have been entered on the books of burial societies, and who die prematurely, are children who have been put out to *dry nurse* to enable the mothers to take places as “wet nurses.”

Although it was my intention to treat the subject of this paper strictly in its sanitary aspects, and to address my remarks more particularly to medical men, I have been almost unconsciously led into the consideration of other social questions of equal im-

portance ; and I have no reason to regret having entered upon the more extended view of the subject, because in the first place, they are questions which must be interesting to all social reformers ; and, secondly, I think that those (I refer now to members of the medical profession) who would desire to aid the special cause we are about to consider would do well to regard it, not only in its physical aspects, not only from what is termed a “medical point of view,” but in reference to its moral and social relations and influences.

In a paper which was read in London last February before a medical audience, I advocated the use of vegetable or farinaceous substances, in combination with cows’ milk, as a proper food for infants, from the earliest period of existence.

Hand-feeding has got into disrepute because it is in general so unsuccessful in its results ; and as “convulsions” and other disorders, terminating fatally in childhood, are often traced, when properly investigated, to the improper use of farinaceous substances, a prejudice has arisen against that kind of food, and it is interdicted as injurious by medical practitioners ; consequently the public, taking alarm without reason, look upon farinaceous food as little short of poison in its pernicious effects upon the infant constitution. This is a foolish and fatal error ! Not less absurd, though far less mischievous, would it be to prohibit bathing altogether, because some reckless persons, ignorant of the art



of swimming, plunge into the water, and are drowned. I am strongly convinced that it is not so much the kind of food that kills as the ignorant manner in which food given to infants is prepared and administered.

There are two extremes prevalent, both equally to be deprecated,—namely, the excessive use of farinaceous food, and its entire prohibition. I consider that to depend wholly upon animal milk is a most disastrous practice, and in many cases induces disorders which, if they do not always terminate fatally, set up a condition which predisposes to various ailments in more advanced childhood, and even in later periods of life. These disorders are rarely referred to the true cause, but are described as “constitutional,” “developmental,” and so on; when the truth is that the system, being deprived of the elements in its food necessary for growth and development, suffers from *defective nutrition*, and consequently has not power to carry on its processes in a natural and satisfactory manner. It would be curious to know how many of the deaths returned in the registrars’ reports under “Want of breast-milk,” are those of children who were attempted to be reared (but in effect were starved) upon animal milk alone; I fancy the numbers would quite equal those of the children who die in convulsions from “over-feeding.”

I cannot now enter upon the chemical and physiological arguments which I am prepared to



advance in favour of my theory ; I will only state that I believe Chemistry (as far as it is known to us at present) cannot be trusted in this matter. What I mean is this : that although we may learn by chemical analysis that cows' milk approaches nearly to human milk in its constituents and their relative proportions, that fact affords no satisfactory proof that animal milk contains in its elements or component parts the necessary qualities or properties suitable for the nutrition of an infant, so as to render that milk a safe substitute for breast-milk without the addition of other substances ; indeed, *experience tells us quite the reverse*. And as to the physiological facts which have been brought forward by opponents to my views, I have explained at some length in another place,\* that I interpret those same facts in a manner to favour my argument. Comparative anatomy does not teach me that *because* vegetable food is indicated as suitable for digestion in the case of the young of the animal creation, *therefore* the anatomical construction of the human stomach shows the same food to be unsuitable with regard to the human infant. Chemical analysis may aid us in discovering truth, but I have said that it must not be trusted entirely ; *experience* will prove a better teacher in such matters ; for out of well-observed facts we may draw practical conclusions, and trace them with something like cer-

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\* The Comparative Properties of Human and Animal Milks, &c. London : Churchill.

tainty to their respective causes. I am induced on this account to suggest, that unless any medical practitioners can bring their *experience* to bear upon this question, they will reserve their remarks; for although I am anxious to induce discussion on the subject of this paper, I should be sorry for the cause to be prejudiced by the mere repetition of old objections, having no better authority than that derived from the dogmas which belong to *routine practice*, and based upon no solid nor tenable foundation.

If any medical man would undertake to conduct a series of experiments as to the value of farinaceous foods in the cases of children who may be depending entirely upon *artificial feeding*, such a practical experimentalist would perform a signal service to mankind. Let a fair trial be made under the direction and observation of the medical attendant, and let him report the result to the profession and the public through the medical journals, whose columns are always open to contributions which are calculated to benefit the cause of science and humanity.\*




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\* Another consideration in favour of my suggestion is, that *ill-nourished* children—those who are improperly fed, either by an excess of food or unsuitable diet—more readily fall a sacrifice to epidemics; whilst those subjects whose blood is kept in a pure state by wholesome food, have the power of resisting the influences which strike down the feeble frames by hundreds. I believe that diarrhoea is oftener induced by wrong diet than by any atmospheric or other local causes; at any rate, attacks are much more serious and fatal in cases where inattention to diet prevails. If this be true as regards adults, the fact is still more forcible with reference to children.